

Concentrating Solar Power Alliance



CEC Workshop
August 23, 2012

Executive Director
CSP Alliance

- What is the CSP Alliance?
 - An advocacy group formed in March 2012 whose goal is to increase the deployment of CSP
- What does it intend to do?
 - It will inform utilities, grid operators, and regulators of the benefits of CSP with its ability to store thermal energy and provide dispatchable power
- Who are the members?
 - Membership includes Abengoa, BrightSource, Torresol Energy, Lointek, and Cone Drive
 - Others are in the process of joining

The Importance of of Solar Thermal Storage Analysis



- Understanding and disseminating the value of CSP storage is presently the main objective of the Alliance
- While at the Department of Energy,
 - I asked NREL (Paul Denholm) to quantify the value of storage
 - I asked Gerry Braun to form a Project Advisory Committee (PAC) to oversee the NREL analysis
- Alliance and DOE co-sponsored a CSP storage workshop for the PAC in April 2012 that SMUD hosted
- CPUC Commissioner Tim Simon, at the CSPToday conference in June said the value of thermal storage must be quantified before *least cost*, *best fit* gives way to a more accurate CSP project evaluation criteria (e.g. *net system cost*)
- Alliance would like the *net system cost* criteria become State policy

Importance of Solar Thermal Storage



- **33% RPS brings an unprecedented amount of intermittent solar and wind to CA's grid which will lead to operational challenges (e.g. increased ramp rates, need for increased reserve power)**
- **CSP storage can be used to decrease ramp rates and provide spinning reserves**
- **CSP storage enables dispatch of solar power whenever it's needed, reducing curtailment and evening peak demand**
- **CSP storage may enable the grid to reliably accept increased amounts of PV**

CSP STORAGE PROVIDES FLEXIBILITY

Thoughts on Solar Storage Analyses



- Storage analysis incredibly important, but also incredibly complex
- At least 3 organizations are analyzing solar thermal storage (NREL, LBNL, KEMA)
 - They should be independent, but connected in using the same basic assumptions on how CSP storage can be dispatched and how the grid operates
 - If their results are significantly different, it will be difficult for policy makers to believe any of them are accurate
- There needs to be communication between analysts, industry, and CAISO as each has something to learn from the others
 - **Alliance will help in any way it can**

Thank You



Frank “Tex” Wilkins
Executive Director
Concentrating Solar Power Alliance

Phone: (410) 960-4126
tex.wilkins@gmail.com
www.csp-alliance.org

ABENGOA



CONE DRIVE
GEARING SOLUTIONS



Torresol Energy
reinventing solar power



Bright Source
Limitless